

PROJECT DESCRIPTION

If approved, this grant request will secure funding for implementation of a comprehensive coastal restoration program to locate, identify, document, and remove objects that pose a threat to navigation and commercial fishing created by the hurricanes of 2005; to complement the Louisiana Underwater Obstruction Removal Program (Program) administered by the Louisiana Department of Natural Resources, Office of Conservation; and the continuation of such Program. Underwater obstructions pose serious threats to human life and safe navigation throughout Louisiana's coastal areas. The Program will formulate a Plan of Action to precisely locate, identify and remove underwater obstructions, and execute contracts to accomplish these Plans. Additionally, the Program will publish annual charts detailing the locations of known underwater obstructions.

BACKGROUND AND LOCATION

Together Hurricanes Katrina and Rita of 2005 impacted nearly the entire coastal zone of Louisiana. The devastation can be seen in the many pictures taken of buildings and boats that were destroyed or washed away. What can not be seen are the newly created obstructions that now rest below the water's surface. Production equipment and tanks were blown from their platforms. Boats were sunk and numerous objects scattered about making navigation and commercial fishing a hazardous undertaking. Old ship wrecks and other obstructions have been displaced from their former resting spots. Debris from the shore, whether as the remains of buildings and their contents, or movable objects such as automobiles, was swept far out to sea by the storm surge. Therefore, navigators who once knew where it was safe to travel can no longer be certain. Without doubt, other obstructions were uncovered by bottom movement and wave action. These obstructions originate from sources such as thousands of miles of abandoned and active pipelines, remnants of abandoned oil and gas structures, sunken boats and barges, and abandoned dredging equipment. These obstructions pose serious threats to the life and property of all who navigate these waters, especially commercial and recreational fishermen.

In recognition of the seriousness of the hazards and loss of property caused by underwater obstructions, the Louisiana Legislature in 1979 created the Fishermen's Gear Compensation Fund (Fund), a State regulatory program funded by fees assessed on holders of all state mineral leases and grantees of pipeline right-of-ways located within the state's coastal zone. Since its inception, approximately \$20.5 million in claims have been paid from the Fund to compensate commercial fishermen who

suffered equipment losses due to encounters with underwater obstructions. While the Fund provided a means to mitigate financial losses caused by the underwater obstructions, it did not provide a long-term solution. In the last five years the average payout has been \$414,030 per year. This number may or may not rise for the next year because of the fewer number of boats in good repair, but most certainly, the percentage of accidents for the number of boats on the water will rise and perhaps do so dramatically as more boats are placed back in operation.

In an effort to further address the hazards of underwater obstructions, the 1997 Louisiana Legislature passed Act 666, creating the Underwater Obstructions Removal Program. The Program's primary goal was to formulate a Plan of Action for the location and removal of obstructions, the execution of contracts to accomplish the Plan's objectives, and to publish annual charts detailing the locations of known or suspected underwater obstructions. Since no funds were appropriated to the Program by the Louisiana Legislature, initial funding was provided by a three-year grant of \$1,491,000 from the National Oceanic and Atmospheric Administration (NOAA), for emergency relief for damages resulting from Hurricane Andrew. Ultimately, the Louisiana Legislature passed Act 599 of 1999, authorizing the annual transfer of \$250,000 from the Fisherman's Gear Compensation Fund for use by the Program annually ever since, utilizing unused funds that would not affect payments for claims. However, existing funding for the Program will end on June 30, 2007, and the Program will cease operation unless extended.

Although the Program has operated for eight years, it has acquired only enough funding for a very limited clean up effort. \$849,704 has been expended for location and identification of obstructions and \$2,111,201 expended for removals. Funds were not available this fiscal year due to statewide budget actions taken as a result of the hurricanes. The Program has cleared 358 areas of all obstructions having a combined weight of over 5400 tons. A partial list of removed obstructions includes 17 barges, 6 tanks, 172 boats, 87 flow lines, and numerous pipes and pilings. The Louisiana Office of Conservation strongly feels the Program has clearly demonstrated its ability to continue in the pursuit of removal obstructions in State waters. As evidence of this claim, the United States Environmental Protection Agency bestowed the 2001 Second Place Gulf Guardian award to the Program in recognition of its efforts to protect and restore the Gulf.

PROJECT JUSTIFICATION

Whereas the Louisiana Underwater Obstructions Removal Program has made a significant impact since 1998, a large number of underwater obstructions remained in Louisiana's coastal waters before the hurricanes, and that number now has certainly increased several times over.

The proposed project will serve to achieve a threefold objective: (1) conservation, restoration, and protection of the coastal area; (2) mitigation of damage to fish, wildlife, and natural resources; and (3) mitigation of hazards to human health and safety.

The obstructions slated for removal pose a danger to the environment not only from the standpoint of navigational hazards which can result in spills of fuel, crude oil, and other chemicals in transit, but can also serve as point sources of contaminants. Electrical transformers, chemical drums, vehicles, sunken marine vessels, and other objects can contain hazardous chemicals which could cause severe environmental damage if released. Other household items, such as batteries and appliances, can be sources of heavy metals, especially mercury. Introduction of these types of substances into the environment would not only impact marine life, but also the human food supply.

The U.S. Coast Guard was assigned the task of removing hazards in navigation channels and shipping lanes after the hurricanes. Sonar was used in a limited capacity to detect underwater obstructions. They removed obstructions that generally could be seen and only then if the obstruction directly blocked a navigable waterway. Obstructions on the sides of waterways that will eventually become hazards to navigation were not addressed. The maps in the Appendix identify the waterways addressed by the New Orleans District after Hurricane Katrina and the waterways addressed by the MSO Lake Charles after Hurricane Rita.

The areas of bays and the open Gulf of Mexico outside of the shipping lanes have not yet been surveyed by any agency, state or federal. It is the understanding of this office that NOAA is attempting to acquire funding to survey certain portions of the Gulf off the coasts of Louisiana, Mississippi, and Alabama. The maps also identify a proposed 80 square mile area to be surveyed by NOAA adjacent to the Port of Fourchon. The USCG, NOAA, DNR, and other agencies have set up informal lines of communication in which information concerning reports of underwater obstructions are disseminated as they are discovered. As of recent, hazards have been reported in Breton Sound, a large debris field in the West Delta area of Plaquemines Parish, in White Lake in Vermilion Parish, and the Monkey Island and Calcasieu Lake areas of Cameron Parish. At the back of the Appendix are notifications from other agencies of the locations of debris fields from various areas within state waters.

The acquisition of funding for this Program is necessary to continue to locate, identify and remove the underwater obstructions that pose serious threats to human life and safe navigation throughout Louisiana's coastal areas. It should also be recognized that underwater obstructions in Louisiana's coastal waters and the Gulf are not solely

this State's problem. The entire nation continues to benefit from the production of seafood and mineral resources from Louisiana's coastal areas. Approximately \$107 billion of the approximately \$160 billion in royalties and bonuses (\$6 billion per year) collected by the Federal Treasury from minerals extracted **from the Outer Continental Shelf comes from facilities lying off the Louisiana coastline.**

STANDARD OPERATING PROCEDURES

The program proposes to survey and clear obstructions from 80 manageable project areas of approximately six-square miles each. The goal is to complete 20 project areas in each of the next four fiscal years. The areas effected by Hurricane Katrina and Hurricane Rita will be the focal points of the project areas chosen. Selection of the project areas will be based on factors such as the amount of maritime traffic, prior reports of underwater obstructions, volume of commercial and recreational fishing activity, and any other mitigating circumstances. Areas that have been surveyed by other entities will not be resurveyed; however, debris located by the prior surveys may be retrieved by the Program, funds permitting.

Each area will be partitioned with appropriately spaced grid lines on which the survey boat will navigate using differential global positioning systems while scanning the area using side scan sonar of a high frequency. Once the survey is completed, data will be analyzed in the office and all anomalies with their size and location will be recorded. Divers will investigate each anomaly and provide a description of the obstruction. Once an acceptable number of obstructions are identified, a bid will be advertised for their removal. Removal equipment will usually consist of a push boat, crane barge, material barge, and miscellaneous equipment for slinging, cutting, and transportation.

In addition, boats and debris sunk in dockside areas and obstructions piled against bridges will be identified and removed from all the hurricane affected parishes.

PROJECT BUDGET SUMMARY

TOTAL CIAP REQUEST: \$ 20,561,938

The funds received will be allocated to four budget areas: Personnel, Survey, Diving, and Removal. The Project itself will be divided into four Phases in duration of one year each. Phase one will involve the start-up of the program, with Phases 2 through 4 being a continuation of the work begun during Phase 1.

PERSONNEL

Four additional field personnel will be required by the Program to complete the target of 20 six-square mile blocks each year. This schedule will require each field agent to complete on average five projects annually. The field agent positions will be filled with personnel qualifying for hire at the Engineer Intern 2 position level. The preparation and solicitation of bids will primarily be the function of existing Office of Conservation staff, allowing for the immediate upstart of the program while the additional personnel are being hired.

Costs for personnel have been broken down into the categories of Salaries, Travel, Office Supplies, and Other Expenses.

Salaries

	Year 1	Year 2	Year 3	Year 4
Four Engineering Intern 2's \$3,765/month (mid-range)*	\$ 135,540	\$ 187,949	\$ 195,467	\$ 203,285
Fringe Benefits (20%)	\$ 27,108	\$ 37,590	\$ 39,093	\$ 40,657
Indirect Costs (35%)	<u>\$ 47,439</u>	<u>\$ 65,782</u>	<u>\$ 68,413</u>	<u>\$ 71,150</u>
Subtotal:	\$ 210,087	\$ 291,321	\$ 302,973	\$ 315,092

Totals:

Salaries	\$ 722,241
Fringe Benefits	\$ 144,448
Indirect Costs	<u>\$ 252,784</u>
Grand Total	\$ 1,119,473

*Year 1 costs calculated at 9 months per employee and Year 2, 3, & 4 costs at 12 months per employee.

* Year's 2, 3, & 4 contain a 4% escalation in base salary to accommodate performance raises.

Travel

Travel expenses were prepared using the assumptions that the field personnel would work approximately 200 days in the field and would drive the average distance as the Conservation Enforcement Specialists, averaging 2083 miles per month, at a cost of \$750.00 at the allowed \$0.36 per mile.

	Year1	Year 2	Year 3	Year 4
Vehicle (\$3,000/mo.)	\$ 27,000	\$ 36,000	\$ 36,000	\$ 36,000
Lodging (\$4,670/mo.)	\$ 42,030	\$ 56,040	\$ 56,040	\$ 56,040
Per Diem (\$104/day)	\$ 15,600	\$ 20,800	\$ 20,800	\$ 20,800
Total:	\$ 84,630	\$112,840	\$112,840	\$112,840

Office/Field Supplies

The projected expenses for Office/Field supplies include one time charges for the purchase of equipment in year one with a recurring allowance for the purchase of expendables each month thereafter.

The one time purchases for the four proposed personnel in year one will consist of the following:

	Per Individual	Total
Laptops	\$2,225	\$8,900
Printers	\$ 259	\$1,036
Digital Cameras	\$ 200	\$ 800
GPS Units	\$ 337	\$1,348
Magnetometers	\$ 700	\$2,800
DNR Uniforms	\$ 764	\$3,056
Totals	\$4,485	\$17,940

	Year 1	Year 2	Year 3	Year 4	Total
Expendable Supplies (\$500/month)	\$ 4,500	\$ 6,000	\$ 6,000	\$ 6,000	\$ 22,500
Total Office/Field Sup.	\$ 22,440	\$ 6,000	\$ 6,000	\$ 6,000	\$40,440

Other Charges

	Year 1*	Year 2	Year 3	Year 4	Total
Risk Management					
Insurance	\$ 3,150	\$ 4,200	\$ 4,200	\$ 4,200	\$ 15,750
Cell Phones	\$ 1,710	\$ 2,280	\$ 2,280	\$ 2,280	\$ 8,550
Email Server	\$ 915	\$ 1,220	\$ 1,220	\$ 1,220	\$ 4,575
Total Other Charges	\$ 5,775	\$ 7,700	\$ 7,700	\$ 7,700	\$ 28,875

*Year 1 costs were calculated for 9 months and Year 2, 3, & 4 are costs for 12 months.

TOTAL PERSONNEL COSTS:

Year 1 - \$322,932 Year 2 - \$417,861 Year 3 - \$429,513 Year 4 - \$441,632

SURVEY

Surveying will usually be accomplished using sonar. Sonar types will include side scan and Mezotech instruments which would be run over grid lines spaced fifty meters or less and cover a specific area. Specifications of instruments and surveying procedures will be established by the Office of Conservation. All anomalies will be recorded by the surveying contractor and reported for review by Office of Conservation personnel, who will then determine which require further investigation by divers. Partially visible obstructions will also be marked as well as obstructions reported by fishermen and others. A typical survey will consist of an area six square miles. A typical survey project will include:

Approximately 108 mile lines to survey

Survey Rate = 3 mph

Total Time: 5 Days actual surveying

Estimated cost per survey project is \$40,000, which includes data interpretation.

For each year: 20 Surveys at a Cost of \$800,000/year

TOTAL SURVEY COSTS: \$3,200,000

DIVING

Bids will be advertised for a single diving contract with an initial term of one year, and an option to renew each year thereafter, with the total length of the contract not to exceed 36 months. A cost per dive will be bid and a minimum of ten dives will be guaranteed. The approximate cost is estimated to be \$500 per dive, with ten dives made per day, or \$5,000 per day. This is inclusive of boat, divers and all necessary transportation and other associated costs.

Due to the unusually high number of underwater obstructions anticipated to be encountered in areas of the state hardest hit by the hurricanes, diving and removal costs in Phase 1 are expected to be double that estimated for each of the remaining three years. An example of an area with a high density of obstructions is the area in Plaquemines Parish between Tiger Pass and West Delta. The attached report from NOAA documents the locations of fifty hazards found by a professional hydro survey services contractor. Other areas of similar nature are expected to be found in other parts of the parish, as well as in Cameron and St. Bernard Parishes.

Phase 1 Cost - \$400,000

Phase 2 through 4 Costs - \$200,000

TOTAL DIVING COSTS: \$1,000,000

REMOVAL

Costs for removals will vary according to location and description of obstructions. Bids for each removal project will be advertised for contractors with access to boats, barges and cranes. Specific requirements relating to personnel and equipment will be set by the Office of Conservation and will vary for different projects. These requirements may include the crane's lifting capacity, specification of a high-lifting capacity A-frame, large "guillotine" chopping equipment, underwater cutting equipment, slings, divers, and others. Experience has demonstrated that even large steel boats and barges can be removed at reasonable costs.

Phase 1 Cost - \$6,000,000

Phase 2 through 4 Costs - \$3,000,000

TOTAL REMOVAL COSTS: \$15,000,000

SCOPE OF WORK

The Program's proposal is divided into four phases which would be completed in a four year period. Phase 1 represents the start-up of the program which will require going through the hiring process for the four field personnel and acquiring the initial contracts for professional services (diving). Phases 2, 3, and 4 will allow the continued operation of the program.

PHASE 1

Phase 1 consists of acquiring necessary personnel to survey the coast to locate obstructions. Phase 1 will include the survey of 120 square miles and diver services for identification. Phase 1 will focus on those areas of the state waters in which reports of underwater obstructions have been made. As previously stated, areas in need of cleanup that have already been identified include the West Delta area, Monkey Island, and Breton Sound.

The anticipated costs are:

Personnel	\$ 322,932
Surveys	\$ 800,000
Diving	\$ 400,000
Removal	<u>\$ 6,000,000</u>
Total Phase 1	\$ 7,522,932

State Funds Available FY 2006-2007	(\$250,000)
Net CIAP Request	\$ 7,272,932

% Administrative Expenses - $\$322,932 / \$7,272,932 \times 100 = 4.44\%$

PHASE 1 TOTAL REQUEST: \$ 7,272,932

PHASES 2, 3, & 4

Phases 2, 3, & 4 provide for continuing operation of the existing program and consisting primarily of contracting the location and removal of obstruction sites from the remaining 60 six-square miles project areas in state waters. Each Phase should be completed in one year from start-up of the Phase. No additional state funds will be available for these Phases unless monies are appropriated by the Legislature.

Phase 2 costs:

Personnel	\$ 417,861
Surveying	\$ 800,000
Diving	\$ 200,000
Removal	<u>\$ 3,000,000</u>
Total	\$ 4,417,861

% Administrative Expenses – 9.46%

PHASE 2 TOTAL REQUEST: \$ 4,417,861

Phase 3 costs:

Personnel	\$ 429,513
Surveying	\$ 800,000
Diving	\$ 200,000
Removal	<u>\$ 3,000,000</u>
Total	\$ 4,429,513

% Administrative Expenses – 9.70%

PHASE 3 TOTAL REQUEST: \$ 4,429,513

Phase 4 costs:

Personnel	\$ 441,632
Surveying	\$ 800,000
Diving	\$ 200,000
Removal	<u>\$ 3,000,000</u>
Total	\$ 4,441,632

% Administrative Expenses – 9.94%

PHASE 4 TOTAL REQUEST: \$ 4,441,632

TOTAL REQUEST FOR PHASES 1, 2, 3, & 4: \$20,561,938